

# Comparisons of Job Characteristics

**Focus Occupation: Surveyors (17-1022)**

**Associated Occupation: Civil Engineers (17-2051)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 70

**Focus Occupation: Surveyors (17-1022)**

**Associated Occupation: Civil Engineers (17-2051)**

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Engineering and Technology	5.7	24.5	15.1	<<	Extensive education and/or training may be required
Design	5.2	23.4	12.6	<<	Extensive education and/or training may be required
Building and Construction	4.0	21.6	8.9	<<	Extensive education and/or training may be required
Mathematics	9.2	20.0	20.6	0	Current knowledge level may be sufficient
Physics	4.3	15.8	9.2	<<	Extensive education and/or training may be required
Transportation	4.6	13.9	5.6	<<	Extensive education and/or training may be required
Administration and Management	8.4	13.0	12.6	0	Current knowledge level may be sufficient
Public Safety and Security	6.9	12.6	8.4	<<	Extensive education and/or training may be required
Law and Government	5.9	11.3	12.0	0	Current knowledge level may be sufficient
Chemistry	4.8	10.8	3.9	<<	Extensive education and/or training may be required
Geography	3.9	9.7	16.1	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 77

**Focus Occupation: Surveyors (17-1022)**

**Associated Occupation: Civil Engineers (17-2051)**

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematics	6.2	15.7	14.1	<	A higher skill level may be required
Operations Analysis	5.0	14.6	5.3	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	14.5	10.8	<<	Extensive development of skills in this area may be required
Judgment and Decision Making	9.4	14.5	10.7	<<	Extensive development of skills in this area may be required
Science	4.5	11.9	9.0	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	11.7	8.6	<<	Extensive development of skills in this area may be required
Systems Evaluation	6.4	11.7	8.8	<<	Extensive development of skills in this area may be required
Management of Personnel Resources	6.9	11.2	9.9	<	A higher skill level may be required
Management of Material Resources	3.7	9.1	5.0	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	8.9	4.3	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 92			
Focus Occupation: Surveyors (17-1022) Associated Occupation: Civil Engineers (17-2051)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Problem Sensitivity	11.1	15.4	11.3	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.2	13.1	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	14.9	14.7	0	Current ability level may be sufficient
Inductive Reasoning	10.2	14.4	11.6	<	Some improvement in abilities may be required
Visualization	7.5	14.1	10.8	<<	Extensive improvement in abilities may be required
Number Facility	6.3	13.9	13.3	0	Current ability level may be sufficient
Information Ordering	9.9	13.8	12.0	<	Some improvement in abilities may be required
Category Flexibility	9.0	13.4	10.8	<	Some improvement in abilities may be required
Flexibility of Closure	7.8	13.3	12.1	0	Current ability level may be sufficient
Perceptual Speed	7.4	11.8	9.2	<	Some improvement in abilities may be required
Speed of Closure	5.9	9.9	8.7	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 95

**Focus Occupation: Surveyors (17-1022)**  
**Associated Occupation: Civil Engineers (17-2051)**

Work Activities	Exclusivity of Activity
Analyze technical data, designs, or preliminary specifications	47
Bid engineering, construction or extraction projects	80
Collect scientific or technical data	30
Communicate technical information	4
Conduct land surveys	81
Conduct plant location surveys	87
Conduct topographical surveys	89
Draw maps or charts	69
Estimate cost for engineering projects	69
Estimate time needed for project	64
Evaluate costs of engineering projects	70
Examine engineering documents for completeness or accuracy	62
Interpret aerial photographs	69
Interpret maps for architecture, construction, or engineering project	77
Judge distances	89
Operate land or site surveying instruments	80
Read blueprints	10
Read maps	42
Read technical drawings	7
Resolve engineering or science problems	46
Understand engineering data or reports	48
Understand property documents	77
Use building or land use regulations	65
Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use drafting or mechanical drawing techniques	50
Use knowledge of regulations in surveying or construction activities	78
Use land surveying techniques	80
Use project management techniques	47
Use scientific research methodology	21

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 87

Focus Occupation: Surveyors (17-1022)  
Associated Occupation: Civil Engineers (17-2051)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Business function specific software	1
Computers	1
Content authoring and editing software	1
Data management and query software	1
Geography and map skills resources and accessories	51
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Land surveying instruments	19
Length and thickness and distance measuring instruments	2
Measuring and layout tools	3
Meteorological instruments	16
Network applications software	1
Personal communication devices	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.